SAN JUAN COLLEGE
Success Matters

HLSC 140 – PHARMACY TECHNOLOGY PROGRAM   5 CREDITS

SYLLABUS

CATALOG DESCRIPTION
This comprehensive, sixteen-week course will prepare students to enter the pharmacy field in hospitals, home infusion pharmacies, and community pharmacies, and work under the supervision of a registered pharmacist.

Prerequisites: High School diploma or GED
                  Application for a Non-Certified Pharmacy Technician License
                  A score of 80% or better on the Pharmacy Calculation pre-test

Semester Offered: Spring/Fall Semester

COMMON STUDENT LEARNING OUTCOMES
Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING
Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING
Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT
Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION
Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY
Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES
Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

COURSE LEARNING OUTCOMES
Upon successful completion of the course, the student will be able to understand:

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GENERAL LEARNING OBJECTIVES

1. Medical terminology specific to the pharmacy.
2. Reading and interpreting prescriptions.
3. Defining drugs by generic and brand names.
4. Dosage calculations.
5. Blood and lymph system.
6. IV flow rates.
7. Drug compounding.
8. Dose conversions.
9. Dispensing of prescription.
10. Inventory control, billing, and reimbursement.
11. Prearranged 45 hours Externship in local Pharmacy.

SPECIFIC LEARNING OBJECTIVES

Upon successful completion of the course, the student will be able to:

1. Pharmacy technician's role in a professional setting:
   A. Familiarization with the overall aspects of the pharmacy technician job and the general role of the pharmacy technician in relation to the pharmacist.
   B. Personal standards.
   C. Training and competency.
   D. Where and when to take the certification and how to keep the certification.

2. Drug regulation, Terminology and prescriptions:
   A. Legislative acts governing pharmacy practice.
   B. Understand FDA processes, drug patents, medication restrictions, controlled substances and their restrictions.
   C. Drug Enforcement Administration numbers-how to verify and the uses for DEA #'s.
   D. Drug recalls.
   E. Appreciate the complexity of medical abbreviations utilized to shorten terminology used in medical communications.
   F. Understanding the prescription process from start to finish.
   G. Understanding the importance of protecting patient privacy and treating all patients with respect.

3. Calculations:
   A. Perform mathematical operations to solve problems with decimals and percent's.
   B. Describe measurement systems used in pharmacy.
   C. Perform mathematical operations to solve problems that involve different units of measurement.
   D. How powder volume is used to solve problems with powders for constitution.
   E. Considerations for children's doses of medications.
   F. Perform basic calculations associated with business aspect of pharmacy.

4. Routes and formulations, parenteral; Sterile formulation and Compounding:
   A. Distinguish between internal and parenteral routes of administration.
   B. Common dosage form used in internal and parenteral routes of administration...
   C. Understand unique characteristics or limitations of dosage forms used in these routes of administration.
   D. How <797> plays a role in aseptic technique.
   E. Understand the factors that must be considered before a formulation is compounded.
   F. Determine a beyond-use date for compounded formulations.

G. Describe common equipment used in compounding formulations.
H. How to measure liquids and properly mix solids and semi-solids.
I. Describe techniques used in compounding and appreciate the complexity of flavoring and sweetening liquid compounding.

5. How drugs work, affects and efficacy:
   A. Describe how common disease states can lead to altered drug response.
   B. Understand adverse drug reaction and how they may differ from one person to another.
   C. Explain drug to drug interactions.
   D. Describe drug to diet interactions.

6. Information, references, internet and technician references:
   A. Understand the three types of literature.
   B. Familiarization of pharmacy references and how to use them: World Wide Web (internet).

7. Inventory management:
   A. Understand the goal of inventory management and the use of wholesalers and a formulary.
   B. Know how to order and receive inventory and their processes.
   C. Reasons for inventory stocking and storage.

8. Financial issues, community pharmacies:
   A. Understand the cost of medications.
   B. Third party programs and how they work.
   C. Managed care programs: HMOs, POSs, and PPOs.
   D. How to resolve rejected claims.
   E. Billing procedures for Medication Therapy Management Services.
   F. Basic practice in a community pharmacy setting.
   G. How to set up a pharmacy.
   H. Customer service.
   I. Pharmacy Technician duties in a pharmacy.

9. Hospital Pharmacy:
   A. List various members in a hospital setting.
   B. Describe formulary and non-formulary.
   C. Explain why unit dose medications are used in a hospital setting.
   D. Understand the difference between single use and multi-dose vials of medication.
   E. Explain what MSDS sheets are
   F. Demonstrate and understand hospital pharmacy calculations.

10. Mail order pharmacies, long-term care and home infusion:
    A. Know what kind of common used prescriptions are used in mail order pharmacies.
    B. Understand the use of automated systems used in mail order pharmacies.
    C. Understand how state and federal laws apply to mail order pharmacies.
    D. Understand how pharmacy services are handled in long term care.

11. Interpret laboratory results of electrolytes, basic chemistries and complete blood count:
    A. State the significance of electrolyte values.
    B. State the significance of chemistry values such as glucose, cholesterol and cardiac enzymes.
    C. State the significance of CBC values such as hemoglobin, hematocrit, white blood cells and differential count.

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12. Top 200 drugs, brand, generic, sound alike, look alike:
    A. Knowledge of the top 200 drugs used today.
    B. Knowledge of the brand name, generic name, and classification.

ASSESSMENT TECHNIQUES

1. Quizzes
2. Homework/Project
3. Skills Competencies
4. Mid-term Exam
5. Final Exam

ACCOMMODATION STATEMENT

Students who need accommodations (i.e., note-taker, interpreter, special seating, etc.) need to provide accommodation notices to the instructor. Students can contact the Students with Disabilities on Campus (SDOC) Coordinator in the Counseling Center, located in the Administration Building, to make arrangements and provide documentation in accordance with the Americans with Disabilities Act of 1990.

ACADEMIC HONESTY RULES

San Juan College expects all students to adhere to the Academic Honesty Rules as posted on our website, http://www.sanjuancollege.edu/academichonesty. All Health Sciences Programs have a responsibility to ensure enrolled students and graduates are safe, ethical and competent practitioners. To ensure professionalism, students and faculty must uphold and abide by college and program accreditation specific policies.

SYLLABUS DEVELOPED AND/OR REVIEWED BY:

Dean of Health Sciences: _____ Date: _____

Director of Respiratory/ _____ Date: _____
Pharmacy Technology

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